

**CLAIMS****CLAIMS 1-23 (CANCELED)**

- 24 (new) A method to treat a condition of lowered cellular, tissue and blood levels of S-adenosyl-l-methionine by increasing S-adenosyl-l-methionine levels in cells, tissue and blood, comprising administering to an animal in need thereof an effective amount of a substantially optically pure (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof or a defined non-racemic ratio of (S,S)-S-adenosyl-l-methionine to (R,S)-S-adenosyl-l-methionine or pharmaceutically acceptable salts thereof.
- 25 (new) The method according to claim 24 wherein the (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof comprises at least 80.001 % by weight of the S-adenosyl-l-methionine administered.
- 26 (new) The method according to claim 24 wherein the (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof comprises at least 85.00% by weight of the S-adenosyl-l-methionine administered.
- 27 (new) The method according to claim 24 wherein the (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof comprises at least 90.00 % by weight of the S-adenosyl-l-methionine administered.
- 28 (new) The method according to claim 24 wherein the (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof comprises at least 96.999 % by weight of the S-adenosyl-l-methionine administered.

- 29 (new) The method according to claim 24 wherein the condition to be treated is selected from the group consisting of: DNA and RNA hypomethylation, ageing, Alzheimer's disease, osteoarthritis, rheumatoid arthritis, cancer, depression, chronic liver disease, alcohol liver disease, cirrhosis of the liver, strokes, Parkinson's disease, impaired memory, HIV, HIV dementia, auto-immune diseases, and parenteral nutrition induced liver disease.
- 30 (new) The method of claim 24 wherein the route of administration of a substantially optically pure (S,S)-S-adenosyl-l-methionine or a pharmaceutically acceptable salt thereof or a defined non-racemic ratio of (S,S)-S-adenosyl-l-methionine to (R,S)-S-adenosyl-l-methionine or pharmaceutically acceptable salts thereof is chosen from the group consisting of topical, systemic, oral, intranasal, rectal, and transdermal.
- 31 (new) A method of claim 24 wherein a salt of the substantially optically pure (S,S)-S-adenosyl-l-methionine or of a defined non-racemic ratio of (S,S)-S-adenosyl-l-methionine to (R,S)-S-adenosyl-l-methionine is a member selected from the group consisting of salts of S-adenosyl-l-methionine with hydrochloric acid, sulfuric acid, p-toluenesulfonic acid, and 1,4-butanedisulphonic acid.